REMARKS

Claims 1, 3, 6, 8-10, 15, and 16 are now in the application. By this Amendment, claim 1 has been amended. Claims 4, 13 and 16 have been canceled without prejudice or disclaimer. No new matter has been added.

Claims 1, 3, 4, 6, 8-10, and 14-16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,990,542 to Motani (hereinafter "Motani '542") and U.S. Patent No. 5,317,033 to Motani (hereinafter "Motani '033") in view of either U.S. Patent No. 4,818,451 to Arai et al. or in view of U.S. Patent No. 4,912,140 to Tusim, and in further view of EP 0 915 127 to Glück et al. (hereinafter "Glück '127") or in further view of WO 98/51735 to Glück et al. (hereinafter "Glück '735") and in further view of U.S. Patent No. 4,585,825 to Wesselmann.

Claim 1 is amended to recite that the thermoplastic polymer consists of a polymer with a molar mass M_w in the range from 150,000 to 250,000 g/mol and a polymer with a molar mass in the range from 280,000 to 500,000 g/mol.

As appreciated by the Examiner, Motani '033, Motani '542, Arai, Tusim, Glück '127, and Glück '735 cannot reasonably be considered to suggest the above quoted feature. However, the Office Action relies on Wesselmann for curing the deficiencies of Motani '033, Montani '542, Arai, Tusim, Glück '127, and Glück '735.

Wesselmann does not teach foamed polystyrene at all. Instead, Wesselmann teaches the preparation of molded articles using polystyrene resins, i.e., solid thermoplastics. The densities, insulation properties, and mechanical properties of solid thermoplastics are dramatically different from thermoplastic foams, as are the respective applications. How would a skilled artisan predict what effect a particular blowing agent has on the cell structure of bi-modal polystyrene if Wesselmann does not even suggest foaming and the solid thermoplastics taught therein do not contain cells?

Moreover, Applicants respectfully disagree with the assertion in the Office Action at page 3, lines 4-7, that "improvements that are achieved by using bi-modal polystyrene in mechanical properties, such as improved heat resistance, are reasonably expected to be realized in any process that uses such polystyrene and in any final product based on bi-modal polystyrene." At the onset, the argumentation is based on the assumption that the citations may be combined. However, a product based on a bi-modal polystyrene, has, of course, properties that depend on the bi-modal polystyrene. Nevertheless, the issue if whether a skilled artisan would have had a reasonable expectation of success that using the bi-modal polystyrene of Wesselmann in the process of Motani '033 or Motani '542, as modified by Arai, Tusim, Glück '127, and Glück '735 would improve the product of the hypothetical product obtained by the combination of Motani '033, Motani '542, Arai, Tusim, Glück '127, and Glück '735. There is no reasonable expectation of success.

The goods produces by the XPS and EPS process differ in more than just the shape. In the foam board extrusion process (XPS), the hot polystyrene melt is extruded under pressure and foaming occurs within a fraction of a second after exiting the die and cooling. In the bead molding process, expandable polystyrene (EPS) is pre-foamed by heating with air or steam. This takes several minutes to allow for softening of the EPS-particles and to produce the foam particles by evaporation of the low-boiling blowing agent. The totally different foaming processes result in different cell structures, which are important for the insulation and mechanical properties. In the XPS-process no heated air or steam is used. The extrusion foamed board is also not further expanded or molded by heated air or steam. Therefore, the two processes are so different, that the person skilled in the art cannot predict how a change in a process parameter of an EPS process, for example the blowing agent, would affect the properties of a foam boards obtained in the XPS process, and visa versa. In other words, it cannot be stated that merely because a particular blowing agent improves a property of EPS beads would also improve a property of a foam board obtained using that blowing agent.

As set forth above, a skilled artisan cannot predict how changing a process parameter in an XPS process would affect the properties of an EPS foam bead, and visa versa. This is even

more pronounced with regard to the teachings of Wesselmann because this citation is not directed at either process, i.e., Wesselmann does not teach foaming of polystyterene.

Claims 3, 6, 8-10, 15, and 16 are in condition for allowance for at least their dependence on an allowable claim 1, as well as for the separately patentable subject matter that each of claims 3, 6, 8-10, 15, and 16 recites.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants concurrently herewith submit the requisite fee for a Petition for a one-month Extension of Time. Applicants believe no additional fee is due with this response. However, if any such additional fee is due, please charge our Deposit Account No. 22-0185, under Order No. 12810-00034-US from which the undersigned is authorized to draw.

Dated: August 31, 2009

Respectfully submitted,

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